

Poly Func Activity

Monday, November 17, 2014
8:56 AM

Polynomial Functions Activity

Step 1: Take out phones, tablets, laptops (any device with wifi-compatibility) and connect to the internet

Step 2: Connect to <https://www.desmos.com/calculator>

Step 3: Insert the following functions into the input panel and inspect them:

$$y = x$$

$$y = x^2$$

$$y = x^3$$

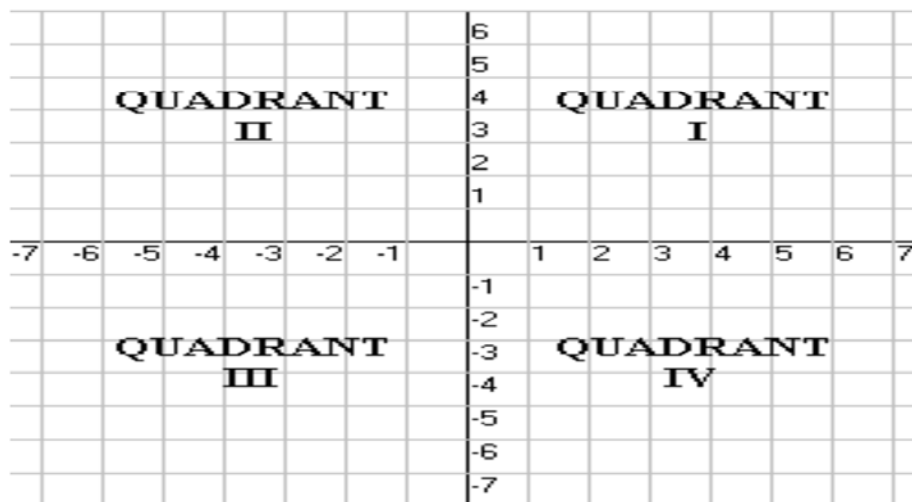
Look, end behaviours, which quadrants the functions cross into, number of x-intercepts, etc. Try placing a negative in front of the highest power of x in each function, what changes?

Mark your observations on a scrap piece of paper and write down what you think the definition of a polynomial function is.

Vocabulary:

End Behaviour: What does the right most side of the graph do? Is it heading up or down?

Quadrants: The four different parts of the Cartesian grid separated by the X and Y axes (yes, axes is the plural form of axis...)



6.1 Notes
Polynomial Functions:
 Friday, November 15, 2014
 8:57 AM

6.1 Polynomials Functions:

A Polynomial Function (PF) is a continuous, smooth function that produces a value y for all unique inputs x .

The largest exponent in a PF is called the degree of the polynomial.

The degree of the polynomial is equal to the number of its possible X-intercepts

Ex) Linear: $f(x) = x$; Quadratic: $f(x) = 3 - x^2$; Cubic: $f(x) = -2x + x^3 + 4$

Degree:

1

2

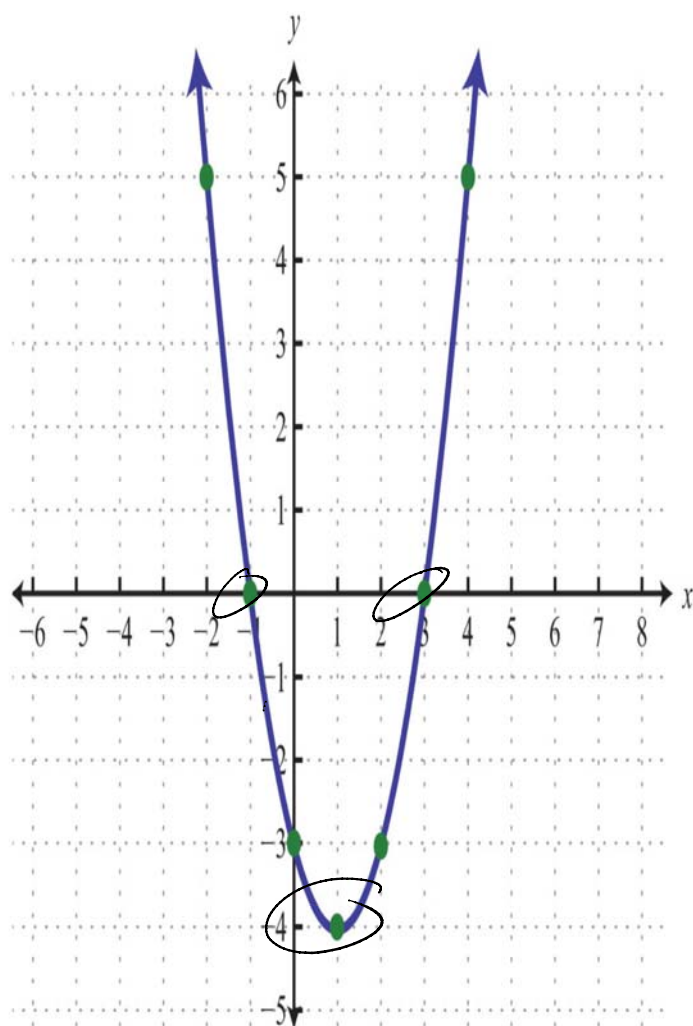
3

The Domain (of x) is always All Real Numbers for polynomials

The Range is bound by a minimum or maximum for polynomials of Even degree, and all real numbers for PFs of Odd degree

* There is always exactly one unique Y-intercept.*

Make use of page 382 in your textbook, it has tons of information!



Describing Graphs:

Degree: 2

X-intercepts: 2

Y-intercepts: 1

Domain: $x \in \mathbb{R}$

Range: $-4 \leq y$

Turning Point(s): 1

End Behaviour:

up into
Q 1

Assignment: 6.1 pg. 383 # 1-4 (optional pg. 400 # 1, 2)